COLING 2000 goes across Europe

Mates the Dachshund, University of the Saarland

This year COLING – the International Conference on Computational Linguistics – returned to Europe: COLING 2000, the 18th in the biennial series, took place in three countries. The main conference was held at Saarland University in Saarbrücken from 31 July to 4 August, preceded by two days of tutorials over the border at LORIA (the Lorraine Laboratory for Research into IT and its Applications) in Nancy, and followed by two days of workshops at Luxemburg. Chairman of the Programme Committee was Martin Kay (Xerox Parc, Palo Alto, California), and Chairman of the Local Organisation Committee was Hans Uszkoreit of Saarland University and DFKI (the German Research Centre for AI).

As usual with COLING, participants came in many shapes and sizes and mother tongues. Probably the most divergent in all three respects was Mates, of the Saarland University Computational Linguistics department. Mates wore his lapel badge more diligently than many participants, but he had to hang it from his collar since he has no lapels: Mates is a dachshund.

ELSNews asked Mates for his impressions of COLING 2000. Since computer keyboards are even today less dachshund-friendly than they might be, we are very grateful to Mates' Saarbrücken colleague Karel Oliva for acting as his amanuensis.

So there it was: COLING of the year 2000. The 18th COLING. The first COLING of the new millennium. The first COLING to be held in the framework of a united but still multilingual Europe – maybe also as an attempt to prove practically that a united Europe can work (or, at least, I guess this was the reason why the pre-conference tutorials were in Nancy, France; the main conference in Saarbrücken, Germany; and the post-conference workshops in Luxemburg. And this cross-national setting was indeed a real success – by means of which it was different from many other actions of the united Europe, and I do not wish to even mention the Euro ...

Maybe if the European Communities were organised by universities and research institutes (such as the organisers of COLING 2000) ... well, who knows?

But the success came in more – and for computational linguists more relevant – areas. Let us have a look at the figures first.

In the LORIA building in Nancy, 288 participants attended nine full- and half-day tutorials over the weekend of 29-30 July.

As for the main conference in Saarbrücken, there were 323 regular papers, and exactly 100 project notes and demonstrations submitted, out of which 110 papers, 24 project notes and 10 demonstrations were accepted for presentation (giving an acceptance rate of about 33%). It is difficult to tell exactly how many papers were actually presented, since a few speakers did not come, and reserve papers were presented in their place. Furthermore, Martin Kay organised an additional session, beyond the original official programme, in

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Conference Report (cont.)

which some of the reserve papers were presented. Altogether, these sessions were attended by a total of 545 participants from 35 countries.

On the premises of the University Centre in Luxemburg, a total of 297 participants attended the five post-conference workshops (including one two-day workshop) over the weekend of 5-6 August.

The figures are, however, not the most impressive aspect. It is the quality and ripeness of the contributions which tell the true story of current computational linguistics: the story of a science which made it from the modest dreams of a couple of enthusiasts some 18 COLINGs ago into a mature, theoretically well-founded science, ready for the industrial applications of today.

Indeed, this seems to be the strongest point the 18th COLING made: it was not only a scientific meeting, as so often in the past. This time, a number of people representing industry were involved in all parts of the conference, appearing not only in the audience, but also taking the floor.

And it was not only in the auditoria that industry was present: a number of firms showed their products and product ideas in the spacious corridors in front of the lecture halls, showing market-ready language engineering products, creating publicity, and recruiting people into R&D labs. What a difference to the situation just a couple of years ago!

Language processing is expanding into a language industry – this is the overall impression, and in my opinion the most important (and most pleasant) message of COLING 2000.

This general trend of leaving the grey theory behind us and climbing rather the green tree of life was to be observed literally everywhere. Definitely in the presence of industry; but also in the shape of the underlying linguistic theories discussed (which aimed at describing 'real language', not just a couple of carefully selected examples); in the papers describing empirical approaches to language (where work with corpora seems to be undergoing a slow, but crucially important shift from purely statistical processing without any language-specific background, into true linguistic interpretation and linguistic data-mining); and in the transfer of theoretical results into practical applications.

Curious about more intimate COLING 2000 details? Of course, there were a lot of other events happening too. All in all, as with any other conference, the scientific programme is just one half of what is important. The

business, is to meet people, and have a chat, or a quarrel. If it were only a matter of presenting the scientific work, we could just as well organise the whole enterprise over the web. So, indeed, there were a lot of small meetings over coffee, biscuits, and laptops in the cafeteria or on the banks of the Saarbrücken campus.

And of course, a big meeting called a reception was also organised. Without laptops, we had to use napkins instead – but on the other hand, there was much more than just coffee and biscuits: European Cuisine United (ECU) was served, with everything from Swedish salmon to Parma ham, from Irish cream to Greek olives. Tasty!

Mates, caught for a moment relaxing without his name badge

As for local specialities, the representative was the eclair, a finger-shaped sweet cake treacherously filled with whipped cream, for some funny reason called Liebesknochen (literally 'love bone') in German. Whatever is meant by this, I have to say that a good pork bone (European or not) is preferred by any of my friends.

The European spirit of the event was also underlined by a trip to Strasbourg. Truly a European city, hosting the seat of the European Parliament and boasting an old city quarter called La Petite France, with the most German architecture I have ever seen, and with very British weather throughout.

So that was COLING 2000. The first COLING of the new millennium. The best of all COLINGs ever, as many said during the closing session. Well, I remember quite a few closing sessions of other COLINGs, and even of non-COLINGs, where similar statements have been heard. But I also remember some saying the new millennium starts only on 1 January 2001. So, who knows? Maybe the upcoming Taipei meeting will be better, and maybe it will be the first one of the new millennium? We will have to wait, come, and see.

Meet you at the 19th COLING (www.COLING2002. sinica.edu.tw) in Taipei in 2002!

FOR INFORMATION

Mates the Dachshund is a regular participant at COLING events. His colleague **Karel Oliva** is Scientific Officer at the University of the Saarland, with research interests in the architecture of computational natural language grammars.

Email: oliva@CoLi.Uni-SB.DE

Web: http://www.coli.uni-sb.de/~oliva

Welcome to New ELSNET Members

*We extend a warm welcome to two new industrial participants of ELSNET: Tilde, which operates in the Baltic countries of Latvia, Lithuania and Estonia; and MTD, from Oisterwijk in The Netherlands. **Andrejs Vasiljevs** from Tilde and **Jeroen Schalken** from MDT tell us a little about their companies.*

Tilde is a leading Baltic IT company which specialises in multilingual and Internet solutions, localisation, and software distribution. It was founded in 1991 in Latvia, and currently has offices in Riga, Vilnius and Tallinn.

Tilde works towards providing language technologies for the languages of the Baltic countries, aiming at the levels of support available for the major languages of the world.

Tilde's products cover language support and proofing tools for Latvian and Lithuanian, multilingual electronic dictionaries (common and terminological), localised fonts, multimedia encyclopedia, and Internet TV. Several thousands of users in Latvia, including government, state organisations, schools, and banks, have purchased Tilde's language software. Our Latvian spelling checker and hyphenater are licensed by Microsoft for inclusion in the Latvian version of Microsoft Office.

We started out with a two-level morphology, which is included in Tilde's electronic dictionary and allows the user to find translations of any word form. We are now expanding our work in new areas of NLP – syntax, machine translation, search tools, speech technologies, and information retrieval.

Due to the growing interest in automated translation among users in the Baltic region, we are working on developing a machine translation system. The system will initially provide automated translation from English into the Baltic languages. Speech synthesis and speech recognition are important NLP technologies for us, and we are seeking cooperation from partners that specialise in these fields.

Tilde also provides Internet, multimedia and e-commerce solutions, and has developed the first multimedia encyclopedia, 'The History of Latvia', and the first Internet TV in the region.

The Tilde Localisation Group provides localisation services for all three Baltic languages. These services continue to assist such companies as IBM, Microsoft, Hewlett Packard, Nokia, and others, to localise their products for the Baltic markets.

At MDT we specialise in speech recognition products. We have developed an interface to common speech engines, and focus on making practical, useful speech applications. Our experts create custom contexts and grammars for our customers. Since the current state of speech recognition technology requires teaching users how to use it, we (and our partners) provide the necessary training.

We are currently working on a speech development platform called 'The Observer'. This is a customisable user interface, which acts as a platform for rapid application development, combining content-driven document development with integrated speech recogniser control. We focus on the European market – currently Dutch, French, German, and English.

The Observer is designed for use in a production environment, such as a hospital or legal office, where there are a lot of almost standard reports. The system combines historical data into its knowledge tree with automatic voice control. It provides dynamic data binding, connections to other information sources (e.g., hospital information systems, imaging hardware), and integrates the results into the document. In addition, dictations can be managed within the dynamic text.

Our next and latest addition will be text-to-speech support, thus making the Observer into a full-grown dialogue management system.

A part of our work also consists of research. The main issues here at the moment are user interaction (often called natural language interface), dialogue management, improving the learning ability of speech engines, and dynamic auto-correcting grammars.

This work has been done together with our partners. We are always on the look-out for new partners (knowledge institutes and industry) and new projects concerning the quality of speech.

FOR INFORMATION

Andrejs Vasiljevs is Tilde's Director of Products and Services.

Email: andrejs@tilde.lv
Web: http://www.tilde.lv/eng
Dictionary on web: www.tilde.lv/Dictionary/English/
Internet TV: www.tv.lv, www.tv.lt, www.tv.ee

FOR INFORMATION

Jeroen Schalken is MDT's Manager of Software Development.

Email: jschalken@mdt.nl

Web: http://www.mdt.nl

EURALEX 2000

Rosamund Moon, *University of Birmingham*

EURALEX – the European Association for Lexicography – held its ninth Biennial Congress in Stuttgart from 8 to 12 August, 2000. There were almost 300 participants, from about 30 different countries. This represents a slight increase on the previous conference (Liège, 1998): a healthy sign of a growing and maturing organisation. All in all, around 90 papers and software demonstrations were presented.

One of the participants (coincidentally, perhaps, from outside Europe) remarked that it was as if there were two conferences going on: one focusing on dictionaries, their history, and contents; and one focusing on 'computers', by which he meant electronic reference data, retrieval software, and computational issues relating to the lexicon. He affiliated himself with the former. The two conferences, he said, had few points of contact.

I think he was wrong. Lexicography – in Europe, at least – is a broad field, and the range of EURALEX members encompasses publishers, academic researchers and teachers, terminologists and terminographers, translators, language planners, and language engineers. What has always been exciting about EURALEX is that each congress has presented a new configuration of its members' interests, and new interactions between people seeking to push back the conventional boundaries and limitations of their own immediate research areas.

The particular configuration of the scientific programme of the Stuttgart congress certainly featured more on dictionaries in electronic formats than was the case at previous congresses. But for me, the presentations were distinguished by coming from lay researchers – i.e., people whose main jobs were in linguistic research and teaching, rather than in computing – and not computational linguistics alone. This seemed further evidence of the union of the two camps or 'two conferences'. For example, one abiding topic at EURALEX congresses has been research into dictionary use and the teaching of dictionary skills to language learners. This year, much of the reported research involved online and other e-format dictionaries, which had been used to explore look-up strategies and to monitor the success of both user and reference source. This was particularly in evidence at the half-day symposium entitled Electronic Dictionaries in Second Language Comprehension and Acquisition, which was organised by members of the Scientific Commission on Lexicology and Lexicography of AILA (the International Association of Applied Linguistics); and also in a paper by Gilles-Maurice De Schryver and Daan Prinsloo, which reported on an interactive dictionary-making methodology where users fed back to the lexicographers on, for example, what forms of words should be included as headword/access items, and how information should be structured.

The three plenary papers themselves reflected the broader range of EURALEX topics. Patrick Hanks (Oxford) explored the tensions between lexicography, linguistics, and corpus evidence, while Herbert Ernst Wiegand (Heidelberg) addressed issues of lexicographical theory – something that in Britain at least seems to be *de facto* rather than real. Ingrid Meyer (Ottawa) took the specific topic of computer terminology which has spread into other domains, and then considered the implications for lexicology and lexicography in general.

For many years, innovations in print lexicography have largely been associated with the British-originating monolingual learners' dictionaries of English: four new rival editions/texts were published in 1995, setting the pace in a number of respects. Discussions of these dictionaries have predominated, leading to the neglect of other kinds of dictionary. However, in Stuttgart there was a feeling that bilingual lexicography was beginning to re-emerge, revitalised, and to correct the Anglocentric imbalance that had been created in the last 10–20 years by monolingual learners' dictionaries.

Traditional EURALEX lexicological topics – combinatorics and phraseology, syntax, morphology, and, of course, semantic description – were also well represented at the congress. So too, though to a lesser extent, were terminology, specialist dictionaries, and historical/philological projects. But the main thrust throughout seemed to be towards the development of new ways of storing and presenting information, and of capturing language use and change.

What is intriguing is what will have happened to the trends observed in 2000 in Stuttgart when EURALEX reassembles in two years' time. Will these trends have been consolidated into standard dictionary praxis, as the use of corpora has been over the period 1986–1996? How will the trends evolve? And, crucially, where will internet and new media technology have taken dictionaries?

We can only wait. The Tenth EURALEX Congress will be held in 2002 in Copenhagen. Details will be available on our web site, and the first circular and call for papers will be issued by early summer 2001. For more information about EURALEX and its activities, and the availability of print proceedings of EURALEX 2000 and previous congresses, visit the EURALEX website.
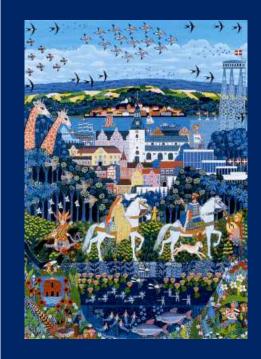
FOR INFORMATION

Rosamund Moon is a Lecturer in English at the University of Birmingham, and member of the EURALEX Board.

Email: MoonRE@hhs.bham.ac.uk

EURALEX Website: http://www.ims.uni-stuttgart.de/euralex

Announcement of Contest

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SIGdial: Special Interest Group on Discourse and Dialogue

*ELSNews extends a warm welcome to SIGdial, the ACL Special Interest Group on Discourse and Dialogue. SIGdial will be using a page of ELSNews to report on its activities in this and the next issue, and this may become a regular feature. On this its first appearance, we welcome an introduction by its president, **Laila Dybkjær,** from the University of Southern Denmark.*

SIGdial: Special Interest Group on Discourse and Dialogue

SIGdial is a Special Interest Group on Discourse and Dialogue which was formed in November 1997 as a Special Interest Group (SIG) of the Association for Computational Linguistics (ACL).

SIGdial is a cooperative organisation driven entirely by volunteers from its membership, which totals more than 200 people from academia and industry in Asia, Australia, Europe and North America. The people with overall responsibility for the SIG are elected. The first officer elections were held in July 1999 and will be held regularly, as dictated by the SIGdial constitution. In addition, many other SIGdial members contribute to running the SIG by, for example: collecting and distributing information about relevant events; liaising with related communities and organisitions; moderating the SIGdial members mailing list; and contributing to the contents of the SIGdial web pages.

The objective of SIGdial is to promote theoretical, empirical, and applied research in computational discourse and dialogue. To achieve its goal, SIGdial seeks to fulfil the following aims:

- to stimulate collaboration and encourage work on developing, challenging, and testing theories of discourse and dialogue by analysing corpora from interactions with actual or simulated unimodal or multimodal dialogue systems, or from human-human interaction;

- to develop and distribute reusable discourse and dialogue processing components, generic architectures, and common toolkits for building complete dialogue systems;

- to explore and develop techniques and metrics for the evaluation of discourse and dialogue components and systems;

- to develop standards and guidelines for discourse and dialogue transcription and annotation;

- to encourage the sharing of discourse and dialogue resources.

In order to strengthen collaboration and bring members from the SIGdial community together, the first SIGdial Workshop on Discourse and Dialogue was held on 7-8 October in Hong Kong, in conjunction with ACL 2000. It was a successful event, with strong support already for

Along with the workshop, a short business meeting was held to discuss ongoing and new initiatives. The possibility of introducing task groups was discussed, to be based on groups of people interested in the same SIGdial sub-areas and wanting to promote and build new knowledge through collaboration. Volunteers offered to launch four different task groups: respectively, on continuation of the Discourse Resource Initiative (DRI); evaluation; multimodal dialogue; and feedback. There was also broad agreement on considerably improving the SIGdial resource web page. During the coming months SIGdial will thus make an effort to collect information on resources in a broad sense, including, for example, tools and coding schemes. Moreover, it was decided to reach out to the International Speech Communication Association (ISCA) for a closer relationship. At the time of writing it is under negotiation whether SIGdial should also become an ISCA SIG.

New members are welcome, and may join SIGdial by visiting http://www.nis.sdu.dk/sigdial/members.php and filling in the form. The membership constitutes an ideal audience for issues pertaining to discourse and dialogue. Members receive information, participate in discussions, initiatives and events focused on or related to discourse and dialogue processing, and contribute to the collective pool of knowledge and resources of the group by sharing their own.

We gratefully acknowledge ELSNET, which is the first external sponsor of SIGdial. ELSNET has generously offered one page in *ELSNews* for SIGdial purposes in this and the following issue.

Text and Speech Triggered Information Access (TeSTIA)

Report of the 8th ELSNET Summer School

Micha Baum, Forschungszentrum Telekommunikation, Vienna

Professor George Carayannis gives his welcoming speech

First of all, a big compliment to the organisation committee of the ELSNET summer school on text and speech triggered information access (TeSTIA) at ILSP, Athens, Greece. Things worked very well during our fourteen days on the beautiful island of Chios (15-30 June), and we were introduced not only to the culture of Greece, but also to the Greek way of life and celebration. We were treated to a Greek course, an excursion to the south of the island, two parties (on the first and last days), and on one evening a band played traditional songs from the island of Chios. All this made the summer school an unforgettable event. I also think that a lot of new friendships and professional relationships were made.

But of course, we came to study. I took six of the ten courses presented, and will mention these here, but the full programme can be found at the TeSTIA website, http://www.ilsp.gr/testia/ testia2000.html.

Alex Hauptmann (Carnegie-Mellon University, USA) claimed that the challenge of multimedia digital libraries is to carry out important functions of our current libraries, such as the collection, organisation, representation, access, and retrieval of information. The data of such libraries need not only be text, but also graphics, images, audio, and video. To give us a taste of this multimodality, in the practical session we used a variety of different search engines to find some pictures, sounds, music, and video.

The course taught by Phil Woodland (University of Cambridge, UK) was on speech recognition, and lectures were primarily about such theoretical basics as Hidden Markov Models, N-grams, speaker and environment adaptation, and so on. We also had three practical sessions on HTK (Hidden Markov Model

Toolkit), which will be available again soon on the web. Again on speech, Paul Taylor (University of Edinburgh, UK) gave a lecture on prosody. We discussed all phenomena related to prosody, like stress, phrasing, and, of course, pitch. Prosodic models were introduced (ToBi, Tilt), but the use of prosody in speech recognition and dialogue systems was also discussed.

As far as pronunciation modelling was concerned, the course was mainly about modelling with decision trees (and included practical sessions). We also talked with Eric Fosler-Lussier (Berkeley, USA) about the external influences on speaker utterances – like gender, environment, and context.

Chris Brew (Ohio State University, USA) introduced XML, a markup language used for annotating text. It is vendor independent, platform independent, and application independent, and is recommended by the W3C (the World Wide Web Consortium), a voluntary association of companies and non-profit organisations.

Finally, Text and Genre Classification by Jussi Karlgren (Swedish Institute of Computer Science) was the only text lecture I attended. He claimed to have achieved more accuracy in the classification of texts, especially in search engines These improvement can be reached by extending the search to include not only keywords, but also the average word-length, average sentence-length, and percentage of digits.

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Some of the participants of the summer school at the welcome reception

Other lecturers were David Hawking (CSIRO, Australia) on Very Large Scale Information Retrieval, Yoshi Gotoh (University of Sheffield, UK) on Language Modelling, Ido Dagan (Bar Ilan University, Israel) on Text Mining, and Christian Jacquemin (LIMSI, France) on Reducing Information Variation in Text.

The participants of the ELSNET summer school came from all over Europe (plus one from Korea). There were linguists, engineers, computer scientists and even one philosopher. Also, the level of education ranged from recent Bachelors to advanced Ph.D. students and staff members. So the challenge of this summer school was to create a programme from which every participant could benefit. The lectures varied in complexity and difficulty, which meant that this challenge was met very well indeed.

FOR INFORMATION

Micha Baum is a Master of Engineering, and currently a PhD student at the Telecommunication Research Centre, FTW, in Vienna.

Email: baum@ftw.at

Yet many long-running world organisations, from the Catholic Church and the IMF to the UN, do not obey any such rule: and if people do not like COLINGs they will stop coming. I hope the ICCL holds out against the pressure: it has a long and honourable international tradition, but still gives a distinctive voice to Europe and Japan in world CL/NLP discussion. It actively seeks to widen the world constituency, and its members put a lot of, largely fruitless, effort into establishing international CL/NLP links with China, although it is curious and interesting that the first world ACL is in Hong Kong and the 2002 COLING in Taipei!

There is also the vital issue of intellectual freedom and fashion: for all their great virtues, the ACL conference and journal have often been driven by intellectual fashion, a fact that is less evident now with the sort of truce we have between statistical and formal methods. COLING has never been driven by fashion to the same degree and, because of its large geographical base, has always included papers on unfashionable themes, sometimes from unfashionable places, and with little loss of quality. It would be hard to argue that the last five COLINGs have had lower standards or rejection rates than the corresponding ACLs.

I hope that both continue to flourish and to provide differing strategies for the determined conference publisher: for ACL, change your first name to a woman's, if need be, to increase your chances (yes, really, just count!); and for COLING, send the paper from somewhere in the Third World, if possible. Perhaps the serious question is what serves the NLP/CL customer best: global cooperation or competition between conferences?

And, finally, goodbye and thanks to *ELSNews* for giving me space for these two years, but it's better to jump before you're pushed [*as if we would ... Ed.*].

FOR INFORMATION

Yorick Wilks is Professor in the Department of Computer Science, University of Sheffield.

Email: yorick@dcs.sheffield.ac.uk
Web: http//www.dcs.shef.ac.uk/~yorick/

In the next issue we will be welcoming our new columnist, Professor John Nerbonne, from the Rijksuniversiteit Groningen in the Netherlands.

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Do we Need COLING and ACL Conferences?

Yorick Wilks, *University of Sheffield*

[The Editor writes:] This is a sad day for ELSNews. *We are seeing the last of Yorick's regular contributions, at least for the time being. Yorick took on the column in November 1998, agreeing to write for it for a year. Two years and eight issues later, we have been treated to more of his thought-provoking opinions than we (and probably he) expected. It is with regret, but with many thanks, that we say goodbye to him in his capacity as regular columnist. We do, of course, hope to hear from him from time to time, either reporting on his own work, or through the odd letter.*

As you will know, from this column if nowhere else, the Association for Computational Linguistics (ACL) has now moved to a global, federal structure and renounced its American imperial origins. It has held a first world ACL conference in Hong Kong in October, quite distinct from the US (NAACL) and Europe-based (EACL) conferences, which will now be officially regional, with the hope of an ACL-Asia conference cycle to follow.

If the ACL is now a global society for computational linguistics and NLP, the question must arise as to whether we need two such biennial conference cycles, the other being the long established COLING, run by the permanent and unelected International Committee on Computational Linguists (ICCL). One answer is that you cannot have too much of a good thing, and that the market will decide what it wants in conferences as in everything else or, in the version preferred by Martin Kay, the ICCL President, as long as people keep turning up with proposals for COLINGs and people keep coming to them, we will go on sponsoring them.

The contrast between the two organisations is revealing: one is run by an elected committee with large financial reserves, dominated by the US, and much concerned with issues like sex equality in the selection of papers. The other, unelected, a permanent committee without even a bank account, dominated by Europe, if anything, and with more concern for issues like the promotion of under-represented regions in NLP. ICCL is currently trying an awareness exercise in Latin America to see if interest in COLING can be raised there, but again, as COLING has no general membership or subscriptions to back it, any initiative is purely personal.

ACL leaders sometimes wonder how something that has nothing they recognise as an organisation can possibly work, and the difference in their websites tells you much: the ACL site (www.aclweb.org) is full of complex information, while the ICCL site (www.dcs.shef.ac.uk/research/units/ilash/iccl/) points you to other sites for

information (such as the current COLING), and contains old world gems like Kay's hints on how to run a successful conference.

Those hints have been well taken: COLINGs tend to be in more old fashioned cities with nice atmospheres, as well as lively sites for CL/NLP, and to give more attention than most to excursions and decent receptions. COLING has never been held in the UK, as opposed to having been twice in Hungary, although the UK has traditionally been a substantial CL/NLP contributor. The reason is simply that no-one can be found to host a COLING in the three or four UK cities that would pass the 'niceness' test, whereas cities like Sheffield or Manchester, where one could get the groups and the hosts, would not pass. As always, the ACL is more robust, and goes for the R&D sites no matter where they are.

The predilection for historical sites for COLING goes back to its origins as a way of institutionalising the links that Dave Hays of the RAND Corporation had with Eastern Europe, and the original Russian and Czech members of ICCL still sit on it. It is a nice paradox of the Cold War that most East-West contact in CL/NLP flowed through a military strong-point like the RAND Corporation in Santa Monica, with its special secure lift to the top floor.

Can the CL/NLP world need two such different organisational entities or should they cooperate more? Joint sessions have been held: I was programme chair of one at Stanford in the early 1980s, when Don Walker ran the ACL, in effect, and was also on ICCL. There was then much talk of wider cooperation, which has survived by the ACL continuing to sell past COLING proceedings, for example.

Cooperation can take many forms, as we know well in the real world of states, from delicate border agreements, to permanent joint sessions, or to a full merge of governments. There are certainly elements in ACL at the moment, in full flush of global outreach, and free of the taint of being a basically US organisation, that would like to see ICCL/COLING disappear in some discreet and seemly fashion, sometimes for wild and false reasons, such as that the ICCL gets flown round the world from COLING conference subscriptions.

Other arguments are rather like those one gets in the UK for abolishing the House of Lords: that responsible organisations must be formed from an elected membership.

The ACL goes International in Hong Kong

Julio Gonzalo, Spanish Distance University (UNED)

This year, for the first time, the ACL went international. The new IACL, held in Hong Kong, attracted a lot of attention, but did it succeed in being a truly international event? Julio Gonzalo was there ...

The first IACL (International meeting of the Association for Computational Linguistics) was held in Hong Kong from 1-8 October. Preceded by a series of tutorials, held at the Hong Kong University of Science & Technology (HKUST), on 1-2 October, the main conference was held at the Hong Kong Convention and Exhibition centre, from 3-6 October. This was followed by a series of workshops, again at the HKUST, on 7-8 October.

The Conference was seen as a major step towards the internationalisation of the ACL, and it succeeded in attracting a large number of researchers from Asia (mainly Japan, Korea and China).

The programme included more research on Asian NLP than ever before. There was a tutorial on morphology for Asian languages by Ken Church, a panel on computational linguistics in South and Southeast Asia moderated by Aravind Joshi, a theme session on Asian Language Processing, and the second Chinese Language Processing workshop, held after the main conference. The submission of papers also reflected the success of the internationalisation efforts, with 73 papers received from the Americas, 97 from Australasia, and 95 from Europe.

From an organisational point of view, I would like to highlight the successful new policy of distributing a CD-ROM with all relevant information from the conference. This includes the proceedings of the main conference, the EMNLP/VLC (Joint SIGDAT Conference on Empirical Methods in Natural Language Processing and Very Large Corpora) conference, held in Maryland, USA, in June 1999, and all the associated workshops. Hopefully, the next step will be the availability of all ACL papers and related material online via the ACL website.

With regard to the scientific content of the conference, my personal feeling was that no particularly new areas or breakthroughs were introduced here. What we did see was a consolidation of recent trends, such as the increasing activity on Question Answering (QA) induced by the new dedicated track at the TREC Conferences. In general, the bonds with the Information Retrieval (IR) community seem to be getting tighter. We had an interesting tutorial on Multilingual Information Access by Douglas Oard, which was organised jointly with the IRAL (Information Retrieval in Asian Languages) conference. There was also a theme session on question answering, where some papers showed the relevance of NL techniques such as anaphora resolution to improving the precision of QA systems. And finally, there was a workshop devoted to the interaction between NLP and IR on the last day of the conference.

Another trend that continued in ACL 2000 was that of mining the web to feed NLP resources or systems, such as in the paper entitled 'Utilising the World Wide Web as an Encyclopedia: Extracting Terms and Descriptions from Semi-Structured Texts'. However this trend was, in my opinion, less prevalent in the conference proceedings than I would have expected.

The invited talks were very good indeed. I would like to highlight the importance given by Professor Joshi in his welcome talk, to the role that NLP would have as one of the few technologies that would help to preserve cultural heritage – rather than globalising world culture – by supporting language diversity in the information

society. Also of interest was the overview of challenges for Spoken Language Technologies, presented by Roger Moore. A projection of the relationship between the amount of training data and the accuracy of speech recognition showed that the 'no data like more data' rule will not suffice to overcome the limit, which is currently close. It appears that members of the speech community are starting to think about ways to improve their crude linguistic models in order to overcome this limit. As the summary of the talk says:

Spoken language understanding continues to be an elusive goal, and the prosodic linkage between acoustic and linguistic patterning is still something of a mystery.

This invited talk should, hopefully, attract more research from the speech community, to be presented at future ACL conferences.

A separate mention has to be made of the presidential address by Wolfgang Wahlster. He made an interesting alternative proposal to the existing conference rotation scheme, namely, that of replacing the current American/European/Asian zones with a 'horizontal approach' for Arctic/Central/Antarctic zones. The conferences on the Arctic and Antarctic zones would be devoted to NLP for Linux (hence the Linux penguin) and the snow Imac.

The banquet was supported by Microsoft, and that is probably the reason why the central zone was reserved for research on NLP for Windows. But the real breakthrough was the announcement of the ACL rap, which the President interpreted, karaoke style, perfectly dressed with his cap on back to front. The ACL rap was finally danced by most members of the executive committee, showing that the ACL community is cooler and hipper than most of us expected!

Aerial view of the Hong Kong Convention and Exhibition Centre

FOR INFORMATION

Julio Gonzalo is a lecturer at the Spanish Distance Learning University (UNED).

Email: julio@ieec.uned.es

Web: http://sensei.ieec.uned.es/~julio

ACL 2000 website: http://www.cs.ust.hk/acl2000/
ACL website: http://www.aclweb.org
Finally, the ACL rap can be downloaded at
http://www.dfki.de/~wahlster/recent_talks.html

Workshop Summary

ELSNET pursues Global Collaboration

Steven Krauwer, ELSNET

In conjunction with ACL 2000 in Hong Kong this October, ELSNET organised a workshop entitled 'Infrastructures for Global Collaboration'.

Some 15 invited participants from Europe, the USA, and Asia, representing international organisations or language communities, gave presentations describing the international and local infrastructures available to support language and speech technology.

The PowerPoint versions of the presentations are available on the ELSNET website:
http://www.elsnet.org/acl2000workshop.html

The main conclusions of the workshop were:

• the presentations provided valuable information on what is happening in Asia, and it was agreed that such information exchanges should continue;

• it would be useful for our communities to create light infrastructures with a wide scope for improved collaboration and exchange of information;

• it would be useful for our communities to set up an international collaboration infrastructure for language resources organisations, which could play a role similar to that of COCOSDA in the field of spoken language resources;

• one very concrete point brought forward was the desirability of building a common web catalogue of tools for NLP and Speech processing, and the participants gratefully accepted ACL and ISCA's offer to take the lead here.

The discussion was continued at the COCOSDA Workshop at ICSLP in Beijing, and will be continued at forthcoming events in 2001.

ELSNET is preparing a number of initiatives in relation to this workshop, and we will keep you informed via our website and in the next issue of *ELSNews*.

Autumn 2000

elsnet

A European Masters in Language and Speech

Gerrit Bloothooft, Utrecht University

An experimental new curriculum in Language and Speech has been developed by 13 European universities and is endorsed by the International Speech Communication Association and the European chapter of the Association for Computational Linguistics.

The study of spoken language communication and the development of applications attracts students that are educated and trained in both speech sciences and natural language processing. Thirteen European Universities have now jointly set up a European Masters course in Language and Speech which features:

• common contents in all relevant areas – theoretical linguistics; natural language processing; phonetics and phonology; cognitive models for spoken language processing; speech signal processing; pattern recognition; language engineering applications; programming skills

• flexible implementation at partner universities, adapted to local circumstances, including duration of studies

• flexible student exchange, and a recommended stay abroad

• traineeship in an academic or industrial environment

• annual European Masters School

• summary of thesis in the electronic WEB-SLS journal

• open to all students who fulfil the University's criteria

• open to any other University that meets the criteria to join the scheme

• in addition to their own national degree, students obtain a certificate signed by the presidents of the International Speech Communication Association, and the European Chapter of the Association for Computational Linguistics.

The advantage of a joint approach is that students, wherever they study, will obtain qualifications based on high standards and best practice, which are fitted to the needs of language industries.

The webpages of the European Masters at http://www.cstr.ed.ac.uk/EuroMasters give background information on the programme, its constitution, the Masters Board, a description of the Masters contents including a downloadable checklist of topics that should be part of the curriculum, and location of all participating universities.

Partner universities are currently:

• Katholieke Universiteit Leuven, Belgium

• Masaryková Univerzita, Brno, Czech Republic

• Aalborg Universitet, Denmark

• Rheinische Friedrich-Wilhelms Universität, Bonn, Germany

• Friedrich-Alexander Universität, Erlangen, Germany

• Universität des Saarlandes, Saarbrücken, Germany

• Universität Stuttgart, Germany

• University of Athens (Ethniko kai Kapodistriako Panepistimio Athinon), Greece

• University of Patras (Panepistimio Patrou), Greece

• Universiteit Utrecht, The Netherlands

• Universitat Politècnica de Catalunya (UPC), Barcelona, Spain

• Ecole Polytechnique Fédérale de Lausanne, Switzerland

• Université de Lausanne, Switzerland

• Université de Genève, Switzerland

• IDIAP Martigny, Switzerland

• University of Sheffield, UK

FOR INFORMATION

For more information contact the co-ordinator of the programme: Gerrit Bloothooft, Utrecht University, Trans 10, 3512 JK Utrecht.

Email: Gerrit.Bloothooft@let.uu.nl

The development of the European Masters in Language and Speech has been made possible by ELSNET (http://www.elsnet.org) and the EU Socrates programme.

Letter
Word Sense Disambiguation – Patented!

In this issue we have a short note rather than a letter, but making an important point nonetheless. Rather appropriately, it has been contributed by Yorick Wilks in this his final issue as regular columnist.

Close students of the great progess being made in patenting the work of everyone in NLP will want to look at a new US patent granted this summer to Bill Dolan at Microsoft: he has patented word sense disambiguation! Check it out at: http://www.uspto.gov/patft/index.html (thanks to Dan Fass for the news). If your work is cited there, you may well wonder whether to be flattered, angry, or just plain amazed!

The First European Masters School on Language and Speech: Impressions and Suggestions

Caren Brinckmann, *University of the Saarland*

*In 1996, ELSNET supported the initiative for the development of a **European Masters in Language and Speech** (see opposite). With the support of the EU Socrates programme a project started that resulted in an E-Masters programme in 1999. The first students were ready in 2000 to attend the first of these schools, which was organised in conjunction with the ELSNET Summer School. **Caren Brinckmann** was among the first students that attended the school. Here are her impressions and some suggestions for the future.*

The E-Masters School on Language and Speech had its première on Chios Island, and it was also the first time that I had ever attended an international summer school. So I was very excited when the small turboprop we had taken from Athens started its descent to Chios airport through a beautiful sunset. And what a relief to find out that all our luggage had been checked through properly from Frankfurt and arrived along with us! Outside the airport there were taxis waiting, and since I had memorised the magic word 'estíes' (student dormitories), we were quickly taken to our accommodation. In spite of my expectations, everything was very well organised – just like the E-Masters school itself!

I had arrived along with three other students and one lecturer from my university. When we went to have dinner at a nice tavern only a few metres from our dormitory, we met some of the other lecturers.

But not all students made contact with the lecturers that easily, especially at the beginning. So it might be a good idea to have an opening dinner instead of (or, even better, in addition to) the terrific farewell dinner we had on the last evening, in order to get to know each other in a very relaxed atmosphere. Also, it would have been nice to know more about the background of the lecturers as well as the students before coming to the E-Masters school. Maybe short c.v.'s of all participants could be made available for everyone in advance. Alternatively, it might be better if everybody briefly introduced themselves on the first day of the school.

Nevertheless, I immensely enjoyed getting to know researchers from all over Europe, and students from different backgrounds, all studying towards the 'European Masters in Language and Speech'. One particular aspect of the School that I found especially valuable was the feedback I got during the discussion which followed my student presentation.

The programme for the school consisted of project presentations, lectures, and student presentations. Considering the short duration of the school (which was only two days), I would have preferred more lectures on specific topics instead of the sometimes very detailed project presentations. Alternatively, or even additionally, some practical sessions in which small teams of lecturers and students work together on a particular subject would be very useful.

Since the E-Masters School took place just before the ELSNET Summer School, TeSTIA, on Chios, all the E-Masters students had the excellent opportunity to attend both schools easily – and that's exactly what I did. I said the magic word 'estíes' many more times and spent the midday break at the beach directly in front of our dormitory having a nice and relaxing swim. Hopefully, students from more than three universities will take the opportunity to participate in the E-Masters School next year, even though it won't be on the beautiful island of Chios!

Book Review

Book Review

Lexicon Development for Speech and Language Processing

edited by **Frank Van Eynde** and **Dafydd Gibbon.**

Published by Kluwer Academic Publishers, Dordrecht / Boston / London.

ISBN 0-7923-6368-X (Hardbound)
ISBN 0-7923-6369-8 (Paperback)
May 2000, 298 pp.

Reviewed by Professor Rodmonga Potapova from Moscow State Linguistic University.

Email: potapova@linguanet.ru

You can order the book from ELSNET by visiting http://elsnet.let.uu.nl/lexicon.html

This book is a collection of lectures of the Fifth European Summer School on Language and Speech Communication that was held in the summer of 1997 at Leuven (Belgium) under the auspices of the European Language and Speech Network (ELSNET). It is based on the central topic of this summer school, 'Lexicon Development for Language and Speech Processing', and is intended for college students and professional scientists, as well as for independent study by people interested in the areas of computational linguistics, language and speech technology.

The chapters include information about computational lexicography; constraint-based lexica; phonology-based lexical knowledge representation; inductive lexica; recognising lexical patterns in text; speech databases; the use of lexica in text-to-speech systems, and in automatic speech recognition; morphology in the mental lexicon, with a computational model for visual word recognition.

The book is divided into nine chapters. The first chapter, 'Computational Lexicography' (by Dafydd Gibbon), gives a detailed description of the concepts of lexicography, lexical structure and lexical signs, and of lexical representation. This is followed by the description of steps taken in practical lexicography. This chapter could be defined as a foundation for the other chapters of the book, and concerns basic concepts and methods of computational lexicography.

The next two chapters, 'Constraint-based Lexica' (by Gosse Bouma, Frank Van Eynde, and Dan Flickinger) and 'Phonology-based Lexical Knowledge Representation' (by Lynne Cahill, Julie Carson-Berndsen, and Gerald Gazdar), focus on the structure and the content of man-made lexica at the morpho-syntactic and morpho-phonological linguistic levels. These chapters concern lexical rules which traditionally used to account

for a wide range of lexical relationships. The results of a lot of research in HPSG (Head-driven Phrase Structure Grammar), carried out in connection with computer-based implementations, are presented.

The chapters on 'Inductive Lexica' (by Walter Daelemans and Gert Durieux) and 'Recognizing Lexical Patterns in Text' (by Gregory Grefenstette, Anne Schiller, and Salah Aït-Mokhtar) present techniques for automatically deriving lexical resources from text corpora. There is a review of some of the symbolic machine learning methods which can be used to add new lexical material to the lexicon by automatically inducing the regularities implicit in lexical representations.

The next three chapters, 'Speech Databases' (by Christoph Draxler), 'The Use of Lexica in Text-to-Speech Systems' (by Silvia Quazza and Henk van den Heuvel), and 'The Use of Lexica in Automatic Speech Recognition' (by Martine Adda-Decker and Lori Lamel), include information about the organisation of speech databases, and the use of lexica in speech synthesis and speech recognition. Speech databases are defined as collections of spoken language that contain the speech signal data, a symbolic description of the speech signal, contracts on ownership, and rights of use.

The last chapter, 'Morphology in the Mental Lexicon: a Computational Model for Visual Word Recognition' (by R. Harald Baayen, Robert Schrender, and Richard Sproat), is devoted to the modelling of morphological processing in the mental lexicon for visual word recognition.

There are three very useful appendices to the book, which give web addresses and resources relating to the development of lexica for speech and language processing.

Altogether, the book is very comprehensive in scope, and the text is clearly written and well organised. The ideas, methods, and results of the research reported throughout the book seek to answer many questions regarding several areas of computational linguistics.

Future Events in 2000

Nov 23-25   *26th Annual Conference on Language Technologies*, Cologne, Germany
klaus.schmitz@fh-koeln.de   http://www.fbi.fh-koeln.de/DEUTERM/ivsw2000E.htm

Dec 4-8   *Conference on Human-Computer Interaction (OZCHI 2000)*, Sydney, Australia
ozchi@welldone.com.au   http://www.cmis.csiro.au/ozchi2000/

Dec 6-8   *The 3rd International Conference of Asian Digital Library (ADL2000)*, Seoul, Korea
info@adl2000.kaist.ac.kr   http://adl2000.kaist.ac.kr

Dec 12-15   *Web-Based Language Documentation and Description*, Philadelphia, USA
Steven.Bird@ldc.upenn.edu   http://www.ldc.upenn.edu/exploration/

Events Coming in 2001

Jan 4-5   *The 2nd Annual Speech Recognition System Design Review*, Sheffield, UK
picone@isip.msstate.edu   http://www.isip.msstate.edu/conferences/srsdr01/index.html

Jan 10-11   *The 4th CLUK Research Colloquium*, Sheffield, UK
cluk-group@dcs.shef.ac.uk   http://www.dcs.shef.ac.uk/research/cluk

Jan 10-12   *The 4th International Workshop on Computational Semantics (IWCS-4)*, Tilburg, The Netherlands
Computational.Semantics@kub.nl http://cwis.kub.nl/%7Efdl/research/ti/Docs/IWCS/iwcs.htm

Feb 1-3   *Pacific Asia Conference on Language, Information, and Computation (PACLIC 15)*, Hong Kong
paclic.15@cityu.edu.hk   http://www.rcl.cityu.edu.hk/padic15

March 18-21   *Human Language Technology Conference (HLT 2001)*, San Diego, California, USA
      http://hlt2001.org

March 19-30   *Vilem Mathesius Lecture Series 15*, Prague, Czech Republic
cmejrek@ufal.ms.mff.cuni.cz   http://ufal.mff.cuni.cz

March 30-Apr 2 *Corpus Linguistics 2001*, Lancaster, UK
mcenery@comp.lancs.ac.uk   http://www.complancs.ac.uk/ucrel/cl2000.html

April 2-3   *Workshop on Innovation in Speech Processing (WISP 2001)*, Stratford-upon-Avon, UK
scox@nuance.com   http://www.sys.uea.ac.uk/wisp-2001/

April 26-28   *1st International Workshop on Generative Approaches to the Lexicon (GL 2001)*, Geneva, Switzerland
Pierrette.Bouillon@issco.unige.ch http://issco-www.unige.ch/conf.html

May 1   *Semantic Web Workshop (WWW-10)*, Hong Kong
stefan@db.stanford.edu   http://semanticweb2001.aifb.uni-karlsruhe.de

June 2-7   *Language Technologies 2001*, 2nd Meeting of the North American Chapter of the Association for
Computational Linguistics, Pittsburgh, Pennsylvania
naaclpgm@isi.edu.   http://www.cscmu.edu/0.000000E+00ref/naacl2001.html

This is a selection of events – see http://elsnet.let.uu.nl/cgi-bin/elsnet/events.pl for more.

ELSNET

Office
Steven Krauwer,
Co-ordinator
Brigitte Burger,
Assistant Co-ordinator
Monique Hanrath,
Secretary
Utrecht University (NL)

Task Groups
Training & Mobility
Gerrit Bloothooft,
Utrecht University (NL)
Koenraad de Smedt,
University of Bergen (NO)

Linguistic & Speech Resources
Antonio Zampolli,
Istituto di Linguistica
Computazionale (IT)
and Ulrich Heid,
Stuttgart University (DE)

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University of Pisa (IT)

ELSNET Participants

Academic Sites

AT	Austrian Research Institute for Artificial Intelligence (ÖFAI)
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AT	Vienna University of Technology
BE	Leuven University
BE	University of Antwerp – UIA
BG	Academy of Sciences Institute of Mathematics
BY	Belorussian Academy of Sciences
CH	Istituto Dalle Molle (IDSIA)
CH	University of Geneva
CZ	Charles University
DE	Christian-Albrechts University, Kiel
DE	German Research Center for Artificial Intelligence (DFKI)
DE	Institute of Applied Information Science (IAI)
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DE	Universität Erlangen
DE	Universität Hamburg
DE	Universität Stuttgart
DE	Universität des Saarlandes
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DK	Center for Sprogteknologi
DK	Odense University
ES	Polytechnic University of Catalonia
ES	Polytechnic University of Madrid
ES	Polytechnic University of Valencia
ES	Universitat Autonoma de Barcelona
ES	University of Granada
FR	CRIN, Nancy
FR	IRISA/ENSSAT, Lannion
FR	Inst. National Polytechnique de Grenoble
FR	Institute de Phonétique, CNRS
FR	LIMSI/CNRS, Orsay
FR	Université Paul Sabatier (Toulouse III)
GE	Tbilisi State University, Centre on Language, Logic and Speech
GR	Institute for Language & Speech Processing (ILSP), Athens
GR	NCSR 'Demokritos', Athens
GR	University of Patras
HU	Lóránd Eötvös University
HU	Technical University of Budapest
IT	Consorzio Pisa Ricerche
IT	Consiglio Nazionale delle Ricerche
IT	Fondazione Ugo Bordoni
IT	IRST, Trento
IT	Università degli Studi di Pisa
IE	Trinity College, University of Dublin
IE	University College Dublin
LT	Institute of Mathematics & Informatics
NO	Norwegian University of Science and Technology
NO	University of Bergen
NL	Eindhoven University of Technology
NL	Foundation for Speech Technology
NL	Leyden University
NL	TNO Human Factors Research Institute
NL	Tilburg University
NL	University of Amsterdam
NL	University of Groningen
NL	University of Nijmegen
NL	University of Twente
NL	Utrecht University
PT	Faculdade de Ciencias da Univ. de Lisboa
PT	INESC, Lisbon
PT	New University of Lisbon
PL	Polish Academy of Sciences
RO	Research Institute for Informatics (ICI)
SE	KTH (Royal Institute of Technology)
SE	Linköping University
RU	Russian Academy of Sciences, Moscow
UA	IRTC UNESCO/IIP, Kiev
UK	Leeds University
UK	School of Oriental and African Studies
UK	UMIST, Manchester
UK	University College London
UK	University of Brighton
UK	University of Cambridge
UK	University of Dundee
UK	University of Edinburgh
UK	University of Essex
UK	University of Sheffield
UK	University of Sunderland
UK	University of Sussex
UK	University of Ulster
UK	University of York

Industrial Sites

BE	Lernout & Hauspie Speech Products
DE	AG für Mensch-Maschine Kommunikation GmbH
DE	DaimlerChrysler AG
DE	Electronic Publishing Partners GmbH
DE	Grundig Professional Electronics GmbH
DE	IBM
DE	Langenscheidt KG
DE	Novotech GmbH
DE	Philips Research Laboratories
DE	Siemens AG
DE	Verlag Moritz Diesterweg GmbH
DE	Pc-plus computing
DK	Tele Danmark
ES	Telefonica I & D
FR	Aerospatiale
FR	LINGA s.a.r.l.
FR	LexiQuest
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LV	TILDE
NL	Cap Gemini Nederland BV
NL	Compuleer
NL	Comsys Europe BV
NL	KPN Research
NL	MDT
NL	Polydoc NV
SE	Telia Promotor
RU	ANALIT Ltd
RU	Russicon Company
UK	20/20 Speech Ltd
UK	ALPNET UK Limited
UK	BICC plc
UK	BT Advanced Communications Technology Centre
UK	Cambridge Algorithmica Limited
UK	Canon Research Centre Europe Ltd
UK	Ensigma
UK	Hewlett-Packard Laboratories
UK	Logica Cambridge Ltd
UK	SRI International
UK	Sharp Laboratories of Europe Ltd
UK	Vocalis Ltd

What is ELSNET?

ELSNET, the European Network of Excellence in Human Language Technologies, is funded by the European Commission's Human Language Technologies programme. Members are academic and public research institutes (85) and industrial companies (50) from all over Europe.

The long-term technological goal which unites the members of ELSNET is to build integrated multilingual natural language and speech systems with unrestricted coverage of both spoken and written language. However, the realistic prospect for commercial applications involves systems that are restricted in one way or another. Such systems are of crucial importance for Europe in that they allow implementation of, and access to, the emerging multilingual information infrastructure. These systems also contribute to the increase of European industrial competitiveness by giving better access to product and service markets across language barriers.

Building multilingual language and speech systems requires a massive joint effort by two pairs of communities: on the one hand, the natural language and speech communities, and on the other, academia and industry. Both pairs of communities are traditionally separated by wide gaps. It is ELSNET's objective to provide a platform which bridges both gaps, and to ensure that all parties are provided with optimal conditions for fruitful collaboration.

To achieve this, ELSNET has established an infrastructure for sharing knowledge, resources, problems, and solutions by offering (information) services and facilities, and by organising events which serve academia and industry in the language and speech communities.

Electronic Mailing List

elsnet-list is ELSNET's electronic mailing list. Email sent to elsnet-list@let.uu.nl is received by all member site contact persons, as well as other interested parties. This mailing list may be used to announce activities, post job openings, or discuss issues which are relevant to ELSNET. To request additions/deletions/changes of address in the mailing list, please send mail to elsnet@let.uu.nl

FOR INFORMATION
ELSNET
Utrecht Institute of Linguistics OTS, Utrecht University,
Trans 10, 3512 JK, Utrecht, The Netherlands
Tel: +31 30 253 6039
Fax: +31 30 253 6000
Email: elsnet@let.uu.nl
Web: http://www.elsnet.org